The University of Chicago

SOCIAL CHARACTERISTICS OF INCREASING, STABLE, AND DECREASING CITIES

A PART OF A DISSERTATION SUBMITTED TO THE FACULTY OF THE DIVISION OF THE SOCIAL SCIENCES IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF SOCIOLOGY
DECEMBER, 1945

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CHAPTER VIII

SUMMARY AND CONCLUSION

The aim of this study is to find out whether there are differences in social characteristics in the increasing, stable, and decreasing cities. The increasing cities are those which experienced at least a 10 per cent increase in population from 1920-30, and also showed at least a 10 per cent increase from 1930-40, but the increase from 1930-40 has to be greater than the increase from 1920-30. The principal emphasis is upon a progressive increase. However, in order to get a sufficient number of stable and decreasing cities for comparison, it is not possible to place emphasis on progressive changes. In defining the decreasing city, any city experiencing a slight increase (less than 5 per cent) or a decrease in population from 1920-30, and showing a loss in population from 1930-40 would be considered as a decreasing city. Any city showing an increase ranging from 0 to 10 per cent both in the 1920-30 decade and in the 1930-40 decade would be taken as a stable city. This definition does not require that the percentage of increase in one period be higher or lower than the other period.

After setting up the definitions, cities are selected according to the above mentioned definitions. Since we are chiefly interested in the growth or decline of population by natural process and by migration rather than by political annexation, we eliminate cities showing increasing, stable, or decreasing population because of political annexation. As a result, 68 increasing cities, 76 stable, and 71 decreasing cities are qualified for the study. After the cities had been selected, we proceeded to compare certain social characteristics such as population structure, educational level, economic opportunities, retail institutions, and housing conditions. When differences are found, they may not be due to the effects of population growth or decline alone; the variations may be due to the presence of certain uncontrolled factors such as city size, location, and so forth.

Further comparisons by these factors, taken one at a time as the writer sees fit, are necessary. If the difference in regard to any particular characteristic is small, we apply the test of significance formula to determine whether it is due to sampling error. If the difference is statistically significant and consistent in all detailed comparisons by size, location, and so forth, it is accepted as the effect of population growth or decline.

Many social characteristics are correlated with population changes--growth or decline. The increasing cities selected more people in the prime of life, more people at high educational level. They also selected slightly more males, but less foreign-born whites. On the other hand, the decreasing cities retained the aged people, adults of lower educational level, and slightly more females but considerably more foreign-born whites. The attraction of population in the increasing cities must be economic opportunities. The term economic opportunity may refer to income, employment, or both. In view of the fact that employment and income are resultants of not entirely similar factors and that an area of high income level may not have employment opportunity, or vice versa, it is better to discuss employment and income separately. We found in the increasing cities, there were more jobs, fewer unemployed, but low wages and lowest per capita income among the three types of cities. We may say that the attraction of population in the increasing cities was employment opportunities rather than high wages. This finding is important in the sense that it points out the major cause of migration movement. Among the three types of cities, wages and per capita income in the stable cities were the highest, although the employment level was not as high as in the increasing cities. Wages and per capita income in the decreasing cities were also high in the decreasing cities, but employment condition was most unfavorable. For the last decade, no cities could go through the depression without giving relief to a portion of its population. But the greatest proportion of population unemployed in the decreasing cities suggests that the underlying economic condition has been out of gear. It is difficult to say whether differentials in relief figures are great enough to serve as ground to point to them as destined for permanent decline. Many lines of evidences other than employment data indicated the decreasing cities were

most hard hit by the last depression. The trade figures revealed that the per capita total sales in retail trades were the lowest among the three types of cities. In 7 of the 11 kinds of retail sales, the per capita sales in the decreasing were the lowest. It seemed rather difficult for the decreasing cities to be recovered from economic depression in the year of 1940. Time and conditions have changed since. Many of the decreasing cities must have regained their population and economic strength due to war-time economic expansion.

In many respects occupation is the most important factor determining earnings. Is there any indication that one occupation is more frequent in one type of city than in another? For employed persons in the labor force, the per cent in the increasing, stable, and decreasing cities is about the same in utilities, hotels and lodging places, amusement, government service, and probably also the same in transportation and communication. The increasing cities definitely had a higher proportion of employed persons in construction and agriculture. The stable had a higher proportion in domestic service, at least in the comparison by South if not North. The decreasing cities had a higher proportion of employed persons in manufacture in the North. There seemed no significant differences in trades if the regional factor is considered. To what extent occupational differentials are responsible for the differences in income it is difficult to say. It seems more correct to attribute income differentials to varying wage levels. In other words, low wage levels in the increasing cities may account in part for low per capita annual income.

Many sociological problems are products of population changes. Take housing for instance. Due to rapid growth in total population and in number of families, more dwelling units were built in the increasing cities, but the housing shortage was still acute. Housing facilities in the increasing cities fared worst. There was a lower proportion of homes with private flush toilets and private bath installations, running water, and electric lighting. Effective measures to improve housing conditions in the increasing cities are urgently needed. The stable cities displayed a better situation. The most favorable situation was in the decreasing cities where we found less crowding, a higher proportion of families equipped with adequate housing facilities, except such modern installation such as electric cooking which is

still not commonly used in the decreasing cities because most of the dwelling units were built 20 years ago. The monthly rent and home values were the lowest in the increasing cities and highest in the stable cities. Home values seem to be determined, to a great extent, by construction costs, and it is the value of the property that determines the amount of rent. The increasing cities not only had more dwelling units built during the last two decades, but also more homes owned. This may be due to the fact that a large portion of the dwelling units were recently built with low construction costs. But more jobs and fewer unemployed coupled with the expectation for unearned increment may be the major causes.

Population changes are also associated with educational differentials. The influx of educated people in the increasing cities brings up the educational level of the adults in the increasing cities. But the inadequacy of school facilities coupled with the influences of social and economic factors prevented youths from full realization of educational opportunities. There was a low proportion of youths in school, heaviest teacher load, limited school property investment and school expenditure in the increasing cities. The students in the stable and decreasing cities had better material conditions of school life, lighter teacher load, and greater per-pupil expenditure. The differences in school expenditure among the three types of cities may be explained largely by the lag theory, that is, city governments failed to anticipate the population changes.

The chance of death for persons in the increasing cities is high. Even holding constant the age factor, the death rate in the increasing cities was the highest among the three types of cities. The infant mortality rate was also high. Women in the increasing cities seemed to have a higher fertility rate, for the fecundity ratio is high. There has not been sufficient information for the computation of gross and net reproduction rate for comparison.

It is desirable to state briefly the new findings of the present investigation, findings which are in accord with, or in contrast to, those of the previous investigations such as Professor Ogburn's study of increasing and decreasing cities for the year 1930, and Mr. Jenkins' study of growing and declining villages for the period from 1930-40. The reader has to keep in mind

that the present investigation and the previous studies are not entirely comparable, therefore, concessions should be made.

The following findings are new, although some of them would be expected:

1. Both the age adjusted death rate and the infant mortality rate are higher in the increasing cities than the decreasing cities.

2. In the increasing cities, there is a higher proportion of population 25 years old and over completing 4 years of high school.

3. In the comparisons of cities by size, proximity to metropolitan district, and per cent of population in manufacturing and trades, the increasing cities show lower salary per teacher. However, in the regional comparison, the difference in the South is not as significant as in the North. Lower salary per teacher merely reflects the general income level of the increasing cities.

4. The per cent of persons 14 years old and over in the labor force is about the same in all types of cities. This indicates that unfavorable economic conditions in the decreasing cities must not be explained by the labor supply factor alone.

5. It would be expected that the proportion of persons employed in the labor force would be higher in the increasing cities, but the proportion of unemployed persons and natural dependents be higher in the decreasing cities. The proportion of employed and unemployed persons may be taken as a measure of the economic condition of different types of cities.

6. The proportion of employed persons in the increasing and decreasing cities is not significantly different in amusement, utilities, and transportation and communication.

7. The increasing cities definitely have a higher proportion of employed persons in agriculture and construction than the decreasing cities.

8. The per capita "Buying Income" is higher in the decreasing cities of the North, cities located within the metropolitan district, and cities having a high proportion of population engaged in manufacturing and trades. But the per capita "Buying Income" in the increasing and decreasing cities is not much different in the South, in cities located 10-49 miles from metropolitan district, and cities having a low proportion of population in manufacturing and trades.

9. Cities experiencing more rapid population growth definitely had greater per capita sales in automobile sales, sales in filling stations, in lumber and housing supplies, in hardware stores, and in general merchandise stores. The consistent pattern is shown in the comparisons by size, region, income level, and proximity to metropolitan district, with the exception of those cities located within the metropolitan district where the per capita sales of general merchandise and hardware group in the increasing and decreasing cities differ insignificantly.

10. Although the market for furniture sales was favorable in the increasing cities, there is no consistent trend showing greater per capita sales in furniture in the increasing cities than in the decreasing cities.

11. The increasing cities commanded smaller sales in apparel stores. The pattern is consistent in the comparisons by size, proximity to metropolitan district, income level and region, except for those cities of the South.

12. The difference in per capita sales in food stores and in eating places in the increasing and decreasing cities is neither significant nor consistent in all detailed comparisons.

13. New building keeps pace with a growing population. The increasing cities had more than twice as many dwelling units built as the decreasing cities from 1920-40, and 9 times as many from 1935-40.

14. There are more one-family detached houses, fewer one-family attached homes, and "1-family with business" in the increasing cities. This trend is evident in all detailed comparisons.

15. In the increasing cities, the degree of crowding was higher, housing facilities fared worse than in the decreasing cities. There is a higher proportion of homes with no bathtub or shower, toilet shared, but lower proportion of homes with private toilet and private bath and with running water. There is no significant difference in the proportion of homes having radios, mechanical refrigeration, and electric lighting provided the regional factor is considered. There is a higher proportion of homes cooking with electricity in the increasing cities due to more new buildings recently built with modern cooking installation.

The following findings are not in agreement with the previous investigations:

1. In contrast to Mr. Jenkins' finding, there is an equality in sex ratio in the increasing and decreasing cities after the regional factor is considered.

2. In contrast to Mr. Ogburn's finding, the proportion of youths 16-17 years old attending school is lower in the increasing cities than in the decreasing cities. The difference is apparent in the comparisons by size, proximity to metropolitan district, and per cent of population in manufacturing and trades. However, the difference is not asstatistically significant in the South as it is in the North.

3. In contrast to Mr. Jenkins' finding, the present investigation revealed that the higher per pupil expenditure in the decreasing cities is due largely to continuing increase of school expenditure and less due to the decline in school population. The rate of school expenditure increase is greater than the rate in school population. This is true for all types of cities.

4. With the exception of cities located within the metropolitan district, and cities having less than 30 per cent of the population engaged in manufacturing and trades, there is no evidence showing that the increasing cities had significantly higher home values in the comparisons by size, region, proximity to metropolitan district, and per cent of population in manufacturing and trades. Professor Ogburn's finding of higher home value in the increasing cities may be in part due to factors other than population change. The same argument is applicable in regard to monthly rental.

The following findings are either partly or entirely in accord with the previous investigations:

1. Both Professor Ogburn's and the present investigation found that the per cent of foreign-born whites is higher in the decreasing cities than in the increasing cities. However, the present investigation revealed that when cities are compared by region, the difference in the South is not as statistically significant as it is in the North.

2. The three investigations agreed that the increasing places had more youths and middle-aged adults, but fewer old people.

3. The present investigation displayed a higher fertility

rate in the increasing cities, Jenkins' higher in the growing places.

4. Both Mr. Jenkins' and the present investigation found that the increasing places had a heavier teaching load and the decreasing cities had higher per pupil current school expenditure.

5. Professor Ogburn's study and the present investigation found the decreasing cities had a slightly higher proportion of employed persons in manufacturing than the increasing cities. The latter found the difference is significant in the comparisons of cities by size, by North, and for cities located within the metropolitan district, but the difference is not significant in the comparisons by South, and for cities located 10-49 miles from metropolitan district, and 50 miles or more.

6. Both Professor Ogburn's finding and the summary figures of the present investigation showed that the increasing cities had a slightly higher proportion of employed persons in wholesale and retail trades. However, the present investigation's detailed comparisons displayed no consistent trend. In the case of wholesale trades, the increasing cities had a higher per cent than the decreasing cities in the comparison by size and proximity to metropolitan district. No difference is found in the comparisons by North and South. In the case of retail trade, there is no significant difference in the comparisons by size, region, and proximity to metropolitan district.

7. The increasing cities showed a larger proportion of employed persons in domestic services. The difference is apparent in the comparisons by size, proximity to metropolitan district, proportion of population in manufacturing and trades, but the difference is not statistically significant in the regional comparison. Mr. Ogburn's finding may be due to regional difference.

8. Mr. Ogburn found there was a greater per cent of working population in hotels and restaurants in the increasing cities. The summary figures of the present investigation showed there is a greater proportion of employed persons in hotels and lodging places. Comparison by size also displayed such a difference. Comparisons by region, proximity to metropolitan district, and per cent of population engaged in manufacturing and trades reveal no consistent difference.

9. Both Mr. Ogburn's and the present investigation dis-

covered that there is not much difference in the average annual earnings in manufacturing and trades. The present investigation found no significant difference in the comparisons by size or proximity to metropolitan district. However, in the North, the decreasing cities had higher wages in the case of retail trade, and higher wages in the South in the case of wholesale trade.

10. Mr. Jenkins found that retail sales have suffered more in the declining villages. The present investigation displayed that the per capita total retail sales is higher in the increasing cities than in the decreasing cities. This is true also in the comparisons by size, income level, region, and proximity to the metropolitan district except for those cities located within the metropolitan district.

11. Professor Ogburn found the increasing cities had higher proportion of homes owned. The present investigation confirms his finding provided the regional factor is held constant.

12. The present investigation confirms Professor Ogburn's finding that size of family is about the same in the increasing and decreasing cities. However, in the North, the increasing cities seemed to have slightly larger families.

The following tables are presented to illustrate the degree of difference in some social characteristics in the increasing, stable, and decreasing cities.

THE AGE ADJUSTED DEATH RATE AND INFANT MORTALITY RATE IN THE INCREASING, STABLE, AND DECREASING CITIES, 1940

	Age Adjusted Death Rate	Infant Mortality Rate
Increasing	15.19	58.02
Stable	13.25	50.75
Decreasing	12.01	40.52

PERCENTAGE OF POPULATION 25 YEARS OLD AND OVER COMPLETING 4 YEARS OF HIGH SCHOOL IN THE INCREASING, STABLE, AND DECREASING CITIES BY SEX, 1940

City	Completing 4 Years of High School	
	Male	Female
Increasing	15.05	19.78
Stable	13.87	18.20
Decreasing	12.54	16.22

EMPLOYMENT OPPORTUNITY IN THE INCREASING, STABLE, AND DECREASING CITIES, 1940

Employment Opportunity	Increasing	Stable	Decreasing
In the labor force, percentage of population 14 years old and over	54.80	55.15	54.88
Employed, percentage of labor force	85.54	84.98	80.06
In amusement and related services, percentage of labor force	.94	.82	.84
In utilities	1.50	1.57	1.54
In transportation and communication	7.41	6.45	7.68
In construction	6.00	4.53	4.09
In agriculture	2.03	.74	.68
Unemployed, percentage of labor force	14.46	15.03	19.68

PER CAPITA ANNUAL "BUYING INCOME" IN THE INCREASING, STABLE, AND DECREASING CITIES, 1940

City	Per Capita Income
Increasing.	$616
Stable.	756
Decreasing.	733

PER CAPITA SALES IN RETAIL STORES IN THE INCREASING, STABLE, AND DECREASING CITIES, 1939 (IN DOLLARS)

Sale Institution	Increasing	Stable	Decreasing
Automobile stores.....	$ 92.34	$ 67.52	$ 56.86
Filling stations.....	33.91	27.81	20.34
Lumber and housing supplies group	32.44	18.99	15.36
Hardware group.....	18.77	9.79	6.27
General merchandise stores.....	74.89	77.50	59.70
Furniture stores.....	25.27	26.55	26.74
Apparel stores.....	36.85	49.97	49.26
Food stores.....	103.29	119.77	117.08

HOUSING CHARACTERISTICS IN THE INCREASING, STABLE, AND DECREASING CITIES, 1940

Characteristics	Increasing	Stable	Decreasing
All occupied units, percentage			
With radio	81.71	92.83	92.57
With mechanical refrigeration	46.47	48.52	47.43
Cooking with electricity	10.94	6.80	3.09
All dwelling units, percentage			
1 family detached	62.68	43.05	35.54
1 family attached	1.40	4.67	2.44
1-4 family with business	2.20	4.01	4.28
Built, 1935-40	12.45	2.86	1.45
Built, 1920-40	38.00	21.59	17.54
With private flush toilet and private bath	60.48	72.86	75.31
With running water	82.26	89.83	95.51
With toilet, exclusive use	67.02	82.85	85.35
With toilet, shared	10.65	7.34	6.35
With no bath or shower	29.89	20.05	18.49
With electric lighting	97.07	96.19	96.77